

AMENDMENT TO THE CLAIMS

Please cancel claims 1-98 (claim 99 having been previously canceled) and amend claims 100, 101, 103, 104, 106-113, 115-119, 121-127 and 130-136 as follows:

Claims 1-99 (canceled).

100. (Currently Amended) A system for real time search, adapted to receive a client query originated by a client system, to receive a plurality of information packets provided by a plurality of information sources or representative of a portion of a signal provided by the plurality of information sources, and to generate query results to be provided to the client system, the system comprising:

an information packet processor, for receiving an information packet and for processing the information packet to generate at least one processed portion of the information packet, wherein the at least one processed portion of the information packet is an at least one extracted term;

storage means, coupled to the information packet processor and to a storage means, for temporarily storing information representative of a reception of the at least one processed portion of the information packet, the storage means being configured to allow fast insertion and fast deletion of content;

a query and result manager, coupled to the storage means, for matching a received client query against at least a portion of a content of the storage means to generate a query result; and

~~The system of claim 98 further comprising~~ at least one module selected from a group of modules consisting of:

a message coordinator module adapted to coordinate ~~a~~ an handling of a plurality of information packets;

a message buffer adapted to hold temporarily the plurality of information packets;

a message filter module for filtering the plurality of information packets according to predefined rules;

- a term extractor module for performing parsing and stemming on said plurality of information packets;
- a terms filter for excluding extracted terms according to predefined rules;
- a queries coordinator module to coordinate the processing of client queries;
- a query-term extractor to parse and stem incoming queries in order to extract and process operative query-terms;
- a query-terms filter for excluding specific query-terms in a predefined manner;
- an archive search module for indexing data on said archive files containing historical informational content and for returning results according to said indexed data;
- a semi-static database search module to act on a semi-static database holding semi-static information source control data;
- a future search module for matching extracted terms from the plurality of information packets against static queries; and
- a queries index for holding queries for a predefined time frame to provide means of future search.

101. (Currently Amended) The system of claim 100 98 wherein the storage means is a term index data structure.
102. (Original) The system of claim 101 wherein the term index data structure is adapted to hold indexed extracted terms and information packet identifiers.
103. (Currently Amended) The system of claim 102 wherein the term index data structure further comprises ~~comprising~~:
 - a terms hash table to hold extracted, filtered and processed terms;
 - a terms inverted file pointed to by said term hash table holding a terms inverted entry map;

a messages hash table to hold information packets identification;
a messages data table to hold information packets data; and
a channel map to hold a list of information sources and the related number
of index terms of said information source.

104. (Currently Amended) The system of claim 103 wherein the terms inverted
file further comprises ~~comprising~~:

a terms inverted entries map table;
a total instances of said term;
a number of information sources containing said term; and
a last modification time of said term.

105. (Original) The system of claim 104 further comprising:

a message terms keyed map;
an information source identification; and
an information packet time of arrival.

106. (Currently Amended) The system of claim 105 wherein the message terms
keyed map further comprises ~~comprising~~:

a pointer to said terms inverted file;
an instances number of said term in said information packet; and
a pointer to said inverted file entry related to said term.

107. (Currently Amended) The system of claim 106 wherein the teams inverted
entries map further ~~comprising~~; comprises:

an information source identification;
an instances number of said term in said information source informational
content; and
a time of last appearance of said term in said information source
informational content.

108. (Currently Amended) The system of claim 100 ~~98~~ wherein said ~~high-update~~ storage means allows fast insertion and deletion of content.
109. (Currently Amended) The system of claim 100 ~~98~~ wherein the ~~fast-update~~ storage means further allows timely deletions of irrelevant or time-decayed terms and query-terms.
110. (Currently Amended) The system of claim 100 ~~98~~ further comprising ~~of at least one of the following~~ a means selected from the group consisting of:
adding means for adding control data to said information packets;
filtering means for the plurality of information packets;
processing means for said extracted terms, to add ~~by adding~~ control information to said extracted terms; and
term filtering means for the extracted terms to generate filtered extracted terms.
111. (Currently Amended) The system of claim 100 ~~98~~ wherein the extracted terms are extracted out of the plurality of information packets by parsing and stemming the plurality of information packets; and wherein the term filtering means are adapted to (a) discard ~~discarding~~ said terms constructed of one-letter words; (b) discard ~~discarding~~ said terms constructed of frequently used words; (c) discard ~~discarding~~ said terms constructed of stop-words; and (d) discard ~~discarding~~ said terms constructed of predefined words.
112. (Currently Amended) The system of claim 110 wherein the control data comprises ~~comprising of~~ information packet identification, information source identification and time of arrival.
113. (Currently Amended) The system of claim 100 ~~98~~ further adapted to receive an information packet; to store the ~~storing~~ information packet with an associated packet identifier in an information packet storage means; to ~~store~~ extracted term

information representative of a reception of at least one extracted term ~~terms~~, said at least one extracted term ~~terms~~ extracted from the information packet; and to link between the stored information packet and the extracted term information.

114. (Original) The system of claim 113 further adapted to delete an information packet and delete the linked extracted term information.
115. (Currently Amended) The system of claim 113 wherein information packets ~~packet~~ are stored in a messages hash, and wherein the linked extracted term information is stored in a terms hash.
116. (Currently Amended) The system of claim 115 wherein the extracted term information comprises ~~comprising~~ of at least one information field selected from a group consisting of:
- a last modification time field, indicating a most recent time in which the extracted term was received;
 - a number of channels containing term, indicating a number of information sources that provided the extracted term;
 - a total instances field, indicating a number of times the extracted term was provided; and
 - a terms inverted entries map, comprising ~~comprises~~ a plurality of terms inverted file entries, each entry holding information representative of a reception of the extracted term from a single information source.
117. (Currently Amended) The system of claim 116 wherein each inverted file entry comprises at least one field selected from a group consisting of:
- a channel identifier, for identifying the information source that provided the extracted term;
 - an instances number, for indicating a number of times the extracted term was provided by an information source; and

a time of last appearance, for indicating a most recent time in which the extracted term was received from an information source.

118. (Currently Amended) The system of claim step 117 wherein each information packet is further associated to a message terms key map, said message terms key map comprising of a plurality of message characteristic entries, each message characteristic entry associated to an extracted term being extracted from the information packet, said message characteristic entry comprising of at least one of the following fields field selected from a group consisting of:

a term inverted file, for pointing to the term extracted information;

an instance of number, for indicating a number of times time said extracted term appeared in the information packet; and

an inverted file entry, for pointing to a terms inverted file entry.

119. (Currently Amended) The system of claim 100 98 further adapted to insert an extracted term into a terms hash table and into a terms inverted file; insert an information source identification, said information source providing ~~provided~~ the extracted term; to a terms inverted entry map table in said terms inverted file; insert information packet data in a messages hash table; insert the extracted term from said information packet to a messages data table; increase a value of instances in said messages data table by one; and update a value of information source identification in said message data table.

120. (Original) The system of claim 119 further adapted to extract an extracted term and accordingly to perform at least one operation selected from a group consisting of:

increase a value of total instances in said terms inverted file;

update a value of last modification time in said terms inverted file;

increase a value of instances number in said inverted entry map table associated with said information source identification in said terms inverted file; and

update a value of message time in said messages data table.

121. (Currently Amended) The system of claim 100 98 further adapted to delete an information packet, and accordingly to perform at least one operation selected from a group consisting of:

receive an information packet identification, whereas the terms extracted from the information packets are to be deleted;

read the information packet identification from a messages hash table in a terms index data structure of said storage means;

obtain relevant entries of said extracted terms belonging to said information packet in said messages data; and

access a terms inverted file of said storage means for each terms entry pointed to in said terms inverted file.

122. (Currently Amended) The system of claim 100 98 further adapted to store alert criteria and to match alert criteria received and processed in the past against newly received terms to generate an alert.

123. (Currently Amended) The system of claim 100 98 further adapted to match the client query against historical archives of informational content to generate an archive query result.

124. (Currently Amended) The system of claim 123 ~~wherein the system~~ further adapted to generate a query result from an archive query result and from a recent query result.

125. (Currently Amended) The system of claim 100 ~~98~~ further adapted to match the client query against a semi-static database of said informational content and having a low incidence of changing to generate a semi-static query result.
126. (Currently Amended) The system of claim 125 ~~wherein the system~~ further adapted to generate a query result from a semi-static query result and from a recent query result.
127. (Currently Amended) The system of claim 100 ~~step 98~~ further adapted to rank information sources according to a similarity between at least a portion of information packets provided by said information sources and between the client query.
128. (Original) The system of claim 127 further adapted to insert a list of ranked information sources in the query result.
129. (Original) The system of claim 128 wherein the step of ranking is based upon a parameter out of a group consisting of: a total amount of extracted terms provided by an information source in a predefined time interval; an elapsed time since the extracted term was provided by the information source in said predefined time interval; and an extracted term position in the information source.
130. (Currently Amended) The system of claim 100 ~~98~~ wherein an information source is selected from a group consisting of: television broadcast providers; radio broadcast providers; data network providers; chat channels providers; news providers; and music providers.
131. (Currently Amended) The system of claim 100 ~~98~~ wherein information packets comprise of content selected from a group of: text, audio, video, multimedia, and executable code streaming media.

132. (Currently Amended) The system of claim 100 ~~98~~ further adapted to compute a similarity between a client query and a group of at least one information packet.
133. (Currently Amended) The system of claim 132 ~~98~~ wherein the group of at least one information packet comprises at least one information packet received from a single information source.
134. (Currently Amended) The system of claim 100 ~~98~~ wherein the similarity reflects at least one parameter selected from the group consisting of the following parameters:
- a total amount ~~amounts~~ of extracted terms being received from at least one information source during a predefined time interval;
 - a number of relevant extracted terms being received from at least one information source during the predefined time interval;
 - a total number of information sources being searched during the predefined time interval;
 - an elapsed time since a last appearance of a relevant extracted term from an information source during the predefined time interval;
 - a position of relevant extracted terms in at least one information source; ~~extracted term~~ in proximity to a relevant extracted term;
 - a part of speech of a relevant extracted term; and
 - a relevant extracted term frequency and importance in a language of the information source.
135. (Currently Amended) The system of claim 100 ~~98~~ adapted to implement a matching technique selected from a group consisting of:
- Boolean ~~boolean~~ based matching;
 - probabilistic matching;
 - fuzzy matching;
 - proximity matching; and

vector based matching.

136. (Currently Amended) The system of claim 100 ~~98~~ adapted to implement
~~implements~~ complex matching techniques.